

Notice of Allowability

Application No.

10/716,589

Examiner

Andrae S. Allison

Applicant(s)

CHAPOULAUD ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 18, 2003.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 06/25/2004; 11/18/2003.

DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance: The most pertinent prior art is Sirat et al (US Patent No.: 5,218, 646) and Lee et al (US Patent No.: 5,978,497). Sirat discloses a classification method implemented in a tree like neural network. Sirat also teaches forming electronic images of a field of view containing elements, wherein each of the elements has a plurality of features and extracting and processing a first subgroup of the plurality of features from the images of the plurality of elements to segregate the plurality of elements into first and second groups. However, Sirat does not teach wherein the second group of elements bypasses the determination of classification class. Lee discloses a free-lying cell classifier. Lee also teaches forming electronic images of a field of view containing elements, wherein each of the elements has a plurality of features and extracting and processing a first subgroup of the plurality of features from the images of the plurality of elements to segregate the plurality of elements into first and second groups. Lee also teaches wherein the second group of elements bypasses the determination of classification class. However neither Sirat or Lee teach determining a classification class only for each of the elements in the first group by selecting and processing a second subgroup of the extracted features to determine a physical characteristic of the element, and selecting and processing a third subgroup of the extracted features in

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response to the determined physical characteristic to determine a classification class of the element. The examiner finds no reason or motivation to combine the above references in an obvious rejection thus placing the application in condition for allowance.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statements of Reasons for Allowance."

Conclusion

The prior art made part of the record and not relied upon is considered pertinent to applicant's disclosure.

Hutcheson et al (US Patent No.: 5,161,204) is cited to teach a method and apparatus for pattern recognition utilizes a neural network.

Rutenberg (US Patent No.: 4,965,725) is cited to teach an automated screening system and method for cyto-logical classification in using a neural network.

Asano (US Patent No.: 5,703,959) is cited to teach a method and device for analyzing particles.

Horesh et al (US Patent No.: 6,091,843) is cited to teach a method of analyzing particles for chemical or biological species.

Micheli-Tzanakou et al (NPL Document Titled "Neural Networks and Blood Cell Identification") is cited to teach a method of identifying cell in human blood and classify.

Ercal et al (NPL Document Titled "Neural Network Diagnosis of Malignant From Color Images") is cited to teach a method that uses discriminant features, based on color and color and using a neural network to classify a tumor cell.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrae S. Allison whose telephone number is (571)

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270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

January 19, 2007

A.A.

JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER